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AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1. (Previously Presented) A method for transmitting a packet of data from a first computing system to a second computing system, the first computing system and the second computing system being included in a client/server object-based computing system, wherein the first computing system is a server and the second computing system is a client, the method comprising:

identifying the packet of data using the first computing system, wherein said second computing system is listening, wherein the packet of data includes data which represents an object in the client/server object-based computing system, the object been identified as an object which the second computing system has an interest in receiving updates;

attempting to send the packet of data from the first computing system to the second computing system;

determining when the packet of data is received by the second computing system; and

sending an acknowledgment from the second computing system to the first computing system when it is determined that the packet of data is received by the second computing system, the acknowledgement being arranged to indicate that the packet of data is received by the second computing system.

2. (Original) A method as recited in claim 1 further including re-attempting to send the packet of data from the first computing system to the second computing system when it is determined that the packet of data is not received by the second computing system.

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3. (Original) A method as recited in claim 2 wherein re-attempting to send the packet of data does not include attempting to establish communications between the first computing system and the second computing system.

4. (Original) A method as recited in claim 2 further including determining when the re-attempt to send the packet of data is successful, wherein when it is determined that the re-attempt to send the packet of data is not successful, an attempt is made to establish communications between the first computing system and the second computing system.

5. (Original) A method as recited in claim 1 further including establishing a connection between the first computing system and the second computing system before identifying the packet of data, the connection being a wireless connection.

6. (Original) A method as recited in claim 1 wherein attempting to send the packet of data from the first computing system to the second computing system includes:

placing the packet of data in a queue using the first computing system, the queue being arranged to prioritize the packet of data with respect to any packets of data associated with the queue; and

removing the packet of data from the queue using the second computing system.

7. (Canceled)

8. (Canceled)

9. (Previously Presented) A method for transmitting a packet of data from a first computing system to a second computing system, the first computing system and the second computing system being included in a client/server object-based computing system, wherein the first computing system is a server and the second computing system is a client, the method comprising:

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a) attempting to send the packet of data from the first computing system to the second computing system, wherein said second computing system is listening, wherein the packet of data includes data which represents an object in the client/server object-based computing system, the object been identified as an object which the second computing system has an interest in receiving updates;

b) determining when the packet of data is received by the second computing system;

c) identifying the packet of data as being successfully sent when it is determined that the packet of data is received by the second computing system; and

d) assuming that packet losses have occurred when it is determined that the packet of data is not received by the second computing system, wherein assuming that packet losses have occurred includes repeating a) and b) for up to a predetermined number of times.

10. (Original) A method as recited in claim 9 wherein assuming that packet losses have occurred includes repeating a) and b) until it is determined that the packet of data is successfully sent.

11. (Original) A method as recited in claim 9 wherein a time differential between each attempt at repeating a) and b) is determined using statistical information including at least one measurement of an amount of time elapsed for another packet of data to be sent and received.

12. (Original) A method as recited in claim 9 wherein when a) and b) have been repeated a predetermined number of times, at least one attempt is made to establish a connection between the first computing system and the second computing system.

13. (Original) A method as recited in claim 12 further including determining when the at least one attempt to establish the connection between the first computing system and

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the second computing system is successful, wherein when it is determined that the at least one attempt to establish the connection is successful, a) and b) are repeated.

14. (Previously Presented) A computer program product for transmitting a packet of data from a first computing system to a second computing system, the first computing system and the second computing system being included in a client/server object-based computing system, wherein the first computing system is a server and the second computing system is a client, the computer program product comprising:

computer code for identifying the packet of data using the first computing system, wherein said second computing system is listening, wherein the packet of data includes data which represents an object in the client/server object-based computing system, the object been identified as an object which the second computing system has an interest in receiving updates;

computer code for attempting to send the packet of data from the first computing system to the second computing system;

computer code for determining when the packet of data is received by the second computing system;

computer code for sending an acknowledgment from the second computing system to the first computing system when it is determined that the packet of data is received by the second computing system, the acknowledgement being arranged to indicate that the packet of data is received by the second computing system; and

a computer readable medium that stores the computer codes.

15. (Original) A computer program product as recited in claim 14 further including computer code for re-attempting to send the packet of data from the first computing system to the second computing system when it is determined that the packet of data is not received by the second computing system.

16. (Original) A computer program product as recited in claim 15 wherein computer code for re-attempting to send the packet of data does not include computer code for

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attempting to establish communications between the first computing system and the
second computing system.

17. (Original) A computer program product as recited in claim 15 further including
computer code for determining when the re-attempt to send the packet of data is
successful, wherein when it is determined that the re-attempt to send the packet of data
is not successful, an attempt is made to establish communications between the first
computing system and the second computing system.

18. (Previously Presented) A computer program product for transmitting a packet of
data from a first computing system to a second computing system, the first computing
system and the second computing system being included in a client/server object-based
computing system, wherein the first computing system is a server and the second
computing system is a client, the computer program product comprising:

 computer code for attempting to send the packet of data from the first computing
system to the second computing system, wherein said second computing system is
listening, wherein the packet of data includes data which represents an object in the
client/server object-based computing system, the object been identified as an object
which the second computing system has an interest in receiving updates;

 computer code for determining when the packet of data is received by the
second computing system;

 computer code for identifying the packet of data as being successfully sent when
it is determined that the packet of data is received by the second computing system;

 computer code for assuming that packet losses have occurred when it is
determined that the packet of data is not received by the second computing system,
wherein assuming that packet losses have occurred includes computer code for re-
attempting to send the packet of data from the first computing system to the second
computing system and computer code for determining when the re-attempt to send the
packet of data is successful for up to a predetermined number of times; and

 a computer readable medium that stores the computer codes.

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19. (Original) A computer program product as recited in claim 18 wherein computer code for assuming that packet losses have occurred includes computer code for re-attempting to send the packet of data from the first computing system to the second computing system and computer code for determining when the re-attempt to send the packet of data is successful.

20. (Original) A computer program product as recited in claim 18 further including computer code for initiating at least one attempt establish a connection between the first computing system and the second computing system when it is determined that the re-attempt to send the packet of data is unsuccessful.

21. (Previously Presented) A client/server object-based computing system, the client/server object-based computing system comprising:

at least one server;

at least one client, wherein the at least one client is listening and being at least periodically in communication with the server across a low-bandwidth communications channel;

a mechanism arranged to reduce statistical information associated with the client/server object-based computing system, the mechanism including a measuring system for measuring time elapsed for a packet of data to be sent by the at least one server to the at least one client, wherein the packet of data determined by the at least one server includes data which represents an object in the client/server object-based computing system, the object been identified as an object which the at least one client has an interest in receiving updates;

a data transmission system, the data transmission system being arranged to transmit data between the at least one client and the at least one server, the data transmission system further being arranged to repeatedly attempt to transmit the data for up to a number of times determined by the mechanism; and

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a reconnection system, the reconnection system being arranged to attempt to reinstate the low-bandwidth communications channel after the transmission system repeatedly attempts to transmit the data for up to the number of times determined by the mechanism.

22.   (Original) A client/server object-based computing system according to claim 21 wherein the low-bandwidth communications channel is an RE link.

23.   (Original) A client/server object-based computing system according to claim 22 wherein the data transmission system is further arranged to optimize the time elapsed between repeated attempts to transmit the data using the statistical information reduced by the mechanism.

24.   (Original) A client/server object-based computing system according to claim 23 wherein the data transmission system and the mechanism are arranged to cooperate to substantially optimize communications bandwidth associated with the client/server object-based computing system.

25.   (Previously Presented) A method for substantially optimizing the transmission of data between a first computing system to a second computing system, the first computing system and the second computing system being included in a client/server object-based computing system, wherein the first computing system is a server and the second computing system is a client, the data including a first packet, the method comprising:

a) gathering statistical information associated with the client/server object-based computing system, wherein gathering the statistical information includes measuring time used to send at least a second packet of data between the first computing system and the second computing system, wherein the second packet of data includes data which represents an object in the client/server object-based computing system;

b) attempting to send the first packet from the first computing system to the second computing system, wherein said second computing system is listening, wherein the first packet of data includes data which represents a first object in the client/server object-based computing system, the first object been identified as an object which the second computing system has an interest in receiving updates;

c) determining when the first packet is received by the second computing system;

d) determining an amount of time to elapse before attempting to re-send the first packet when it is determined that the first packet is not received by the second computing system, the amount of time being determined using the measured time used to send the at least second packet; and

e) attempting to re-send the first packet after the amount of time elapses.

26. (Original) A method as recited in claim 25 further including:

determining a number of times attempts are made to re-send the first packet, wherein the number of times is determined using the statistical information; and

repeating c) and e) for up to the number of times.

27. (Original) A method as recited in claim 26 further including repeating d) for up to the number of times.

28. (Original) A method as recited in claim 26 wherein c) and e) are repeated until it is determined that the first packet is received by the second computing system.

29. (Original) A method as recited in claim 26 further including attempting to establish a communications channel between the first computing system and the second computing system after repeating c) and e) for the number of times.

30. (Original) A method as recited in claim 29 wherein the communications channel is a wireless communications channel.

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31. (Original) A method as recited in claim 30 wherein the wireless communications channel is an RE link.

32. (Original) A method as recited in claim 25 wherein gathering the statistical information further includes measuring long-term and short-term packet loss rates.

33. (Original) A method as recited in claim 32 wherein measuring long-term and short-term packet loss rates includes assuming that packet loss is due to one selected from the group consisting of congestion in the client/server object-based computing system, interference in the client/server object-based computing system, and obstruction in the client/server object-based computing system.

34. (Previously Presented) A method for transmitting a packet of data from a first computing system to a second computing system, the first computing system and the second computing system being included in a client/server object-based computing system, wherein the first computing system is a server and the second computing system is a client, the method comprising:

identifying the packet of data using the first computing system, wherein said second computing system is listening, wherein the packet of data includes data which represents an object in the client/server object-based computing system, the object being represented in an object list in the first computing system, the object list arranged to include objects that are to be updated, and the object also being represented in a filter tree which is arranged to identify objects that the second computing system has an interest in;

attempting to send the packet of data from the first computing system to the second computing system;

determining when the packet of data is received by the second computing system; and

sending an acknowledgment from the second computing system to the first computing system when it is determined that the packet of data is received by the

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second computing system, the acknowledgement being arranged to indicate that the packet of data is received by the second computing system.